



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/539,465

05/02/2006

Peter Wraight

21.1069

6409

23718

7590

07/24/2008

SCHLUMBERGER OILFIELD SERVICES

200 GILLINGHAM LANE

MD 200-9

SUGAR LAND, TX 77478

EXAMINER

FRANK, RODNEY T

ART UNIT

PAPER NUMBER

2856

MAIL DATE

DELIVERY MODE

07/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,465	Applicant(s) WRAIGHT, PETER	
	Examiner RODNEY T. FRANK	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-13, 17, and 18 is/are rejected.
- 7) ☒ Claim(s) 3-6 and 14-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/21/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 7, 11-13, 17, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Moake (U.S. Patent Number 5,469,736). Moake discloses an apparatus and a method are provided for measuring the caliper of a borehole, and the standoff of a drilling tool from the walls of a borehole during a drilling operation. The apparatus includes three or more sensors, such as acoustic transducers arranged circumferentially around a downhole tool or drill collar. The transducers transmit ultrasonic signals to the borehole wall through the drilling fluid surrounding the drillstring and receive reflected signals back from the wall. Travel times for these signals are used to calculate standoff data for each transducer. The standoff measurements may be used to calculate the caliper of the borehole, the eccentricity of the tool in the borehole, and the angle of eccentricity with respect to the transducer position. The eccentricity and angle computations may be used to detect unusual movements of the drillstring in the borehole, such as sticking, banging, and whirling (Please see the abstract).

3. With respect to claim 1, Moake discloses a method for determining a downhole parameter in a drilling environment, comprising activating, by an activation device (6), drilling fluid flowing past the activation device (see column 6, lines 42 through 56);

turning off the activation device (6) for a time sufficient to create an unactivated slug of drilling fluid (see column 6 line 63 through column 7 line 13); detecting the unactivated drilling fluid slug at a known distance (d) from the activation device (6) (see column 8, lines 15 through 24); and determining a time-of-flight (t) for the unactivated drilling fluid slug to travel the distance (d) (see column 7 line 54 through column 8 line 24).

With respect to claim 2, the method of claim 1, further comprising calculating drilling fluid velocity from the time-of-flight (t) and the known distance (d) as disclosed in column 8, line 3 through 24.

With respect to claim 7, the method of claim 1, wherein the method is performed using a logging-while-drilling tool is disclosed in column 5, lines 23 through 65 (disclosed as a LWD, this term is defined in column 2, lines 1-3).

With respect to claim 11, Moake discloses a tool for determining a downhole parameter in a drilling environment, wherein the tool is adapted to be placed in a drill string and wherein the tool comprises a activation device (see column 6, lines 42 through 56) (6) and a gamma ray detector (see column 5 line 65 through column 6 line 19) (7) separated along a drill string axis thereof by a distance d, the tool further comprising control circuitry to turn off the activation device (6) for a time sufficient to create an unactivated slug of drilling fluid flowing past the tool (see column 6 line 63 through column 7 line 13); and processing means (17), coupled to the gamma ray detector (7), for determining when the unactivated slug of drilling fluid flows past the gamma ray detector (7) (see column 6 line 63 through column 7 line 13).

With respect to claim 12, the tool of claim 11, wherein the processing means further determines a time- of-flight (t) for the unactivated drilling fluid slug to travel the distance (d) as disclosed in column 8, lines 3 through 24.

With respect to claim 13, the tool of claim 11, further comprising calculating drilling fluid velocity from the time-of-flight (t) and the known distance (d) as disclosed in column 8, line 3 through 24.

With respect to claim 17, the tool of claim 11, wherein the tool comprises a logging-while-drilling tool is disclosed in column 5, lines 23 through 65 (disclosed as a LWD, this term is defined in column 2, lines 1-3).

With respect to claim 18, the tool of claim 11, wherein the fluid flowing past the activation device is flowing outside the tool as seen in figure 1.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moake.

6. With respect to claim 8, though it is not specifically disclosed which direction the fluid is flowing, as the fluid as drilling continues goes in both directions, then the fluid would be traveling toward the surface. Further, column 5, lines 38 through 45 disclose that the mud rises and then returns to a mud pit.

With respect to claim 9, while the specific distance of the gamma ray detector is not disclosed, the use of such a detector is disclosed in column 6, lines 1 through 25.

With respect to claim 10, while the time frame within which the detector actually detects the slug is not disclosed, the time of detection would be chosen in order to maximize the accuracy of the results of the test. Therefore, the specific detection time is a parameter that would be chosen by one of ordinary skill in the art to be a time frame which would maximize accuracy of measurements.

Allowable Subject Matter

7. Claims 2-6 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RODNEY T. FRANK whose telephone number is (571)272-2193. The examiner can normally be reached on M-F 9-5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RTF

July 24, 2008

/Hezron Williams/

Supervisory Patent Examiner, Art Unit 2856